

Investigation of Semantic Property of Certain Verbs: Relation of Instrumental Adjunct Phrases and Instrumental Information of Verbs*

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1 Introduction

This paper deals with the instrumental information which seems to be included in certain verbs as part of their meaning. Specifically, this information identifies the instrument which is supposed to be used for the action denoted by the verb. Comparing the two sentences in (1), we find that the similar phrases *kagami-o sawa-tta* ‘touched the mirror’ in (1a) and *kagami-o te-de sawa-tta* ‘touched the mirror with one’s hand’ in (1b) sound different.

- (1) a. Taro-wa kagami-o sawa-tta.
Taro-NOM mirror-ACC touch-PAST
Taro touched the mirror.
- b. ?Taro-wa kagami-o te-de sawa-tta.
Taro-NOM mirror-ACC hand-with touch-PAST
?Taro touched the mirror with his hand.

This difference comes from the existence of the phrase *te-de* ‘with one’s hand’ in (1b). I suppose that since the verb *sawar-u* ‘touch’ has the instrumental information *te-de* as part of its meaning, the co-appearance of the phrase *te-de* and the verb *ker-u* causes the redundancy of the instrumental information *te-de*. In the following discussion, I will focus on the relation between such instrumental information of certain verbs and instrumental adjunct phrases as referring to some Japanese examples.

To give a brief overview, section two reviews the difference between arguments and adjuncts, for understanding the basic characteristic of the instrumental information. Section three shows how instrumental adjunct phrases and the instrumental information which is included in verbs relate, and introduces various degree of the specificity of such information. Section four demonstrates how the additional information, which makes the instrumental phrase specific, affects the relation between those instrumental phrases and instrumental information of certain verbs.

2 Comparing with Argument Structure

Hearing that the instrumental information is included in certain verbs as part of their meaning, some readers might think of *argument structure*. However, the instrumental information does not seem to be part of this structure. It is different from arguments in terms of how to relate to verbs. Argument is the element which is obligatorily required to complete the structure or meaning of a predicate. Syntactically, each verb

* In approaching to the relation between the instrumental information in verbs and instrumental adjunct phrases, my thesis adviser, Professor Tomoyuki Yoshida (International Christian University), gave me some helpful advice and supported me working on the research. Special thanks to Professor Diana Archangeli (University of Hong Kong) and Professor Seunghun Lee (International Christian University) for their comments on my presentation at the AJL conference, which enabled me to improve my discussion. And I really thank my colleagues for having meeting every week and working together to improve our research with each other.

has to take a certain number of arguments, as transitive verbs need two arguments and intransitive verbs take only one argument. Each argument plays a role as the syntactic argument such as subjects or objects. The argument also has a semantic role (theta-role) such as experiencer, agent, or theme.

- (2) a. John caught a fish.
 b. *John caught.
 c. *caught a fish.

Comparing the three sentences in (2), we realize that the verb *catch* requires two arguments, subject (*John*) and object (*a fish*), for the sentence (2b) and (2c) with either subject or object is regarded as ungrammatical. Argument structure should be satisfied for the sentence to be grammatical. On the other hand, the instrumental information which we are focusing on in this paper is not strictly relevant to the grammaticality of sentences. That is the reason why I have mentioned that such instrumental information is different from argument structure, though both relate to the structure of verbs. How does the instrumental information specifically differ from the argument structure? We shall look at the examples in (3).

- (3) a. Jenny poked the stuffed animal.
 b. Jenny poked the stuffed animal with a stick.
 c. *Jenny poked with a stick.¹

From the two examples with the phrase ‘with a stick’, (3b) and (3c), we find that the verb *poke* requires two arguments as its argument structure, for the latter sentence is ungrammatical because of its lack of the object. On the other hand, the instrumental information ‘with a stick’ does not seem to be crucial to make the sentence grammatical. Specifically, even if a sentence does not include that phrase as (3a), it is grammatical as long as the argument structure of the predicate is satisfied. As shown in example (3), generally the instrumental information is no more than adjunct; thus its existence is not related to the grammaticality.

But what is interesting about such instrumental phrases is that they are sometimes incompatible with certain verbs, though they are supposed to freely appear as adjuncts. In particular, the instrumental phrases with the inalienable possession tend to have this feature. In the following section, we will look into how some instrumental adjunct phrases do not match certain verbs.

3 Instrumental Adjunct Information

3.1 Finding Instrumental Information We shall look at example with the verb *ok-u* ‘put’, the original form of *o-ita* ‘put (PAST)’ in (4).

- (4) a. Taro-wa yuka-ni hako-o oi-ta.
 Taro-NOM floor-on box-ACC put-PAST
Taro put a box on the floor.
 b. ?Taro-wa yuka-ni hako-o **te-de** oi-ta.
 Taro-NOM floor-on box-ACC hand-with put-PAST
*Taro put a box on the floor **with his hand**.*

Although only the difference between (4a) and (4b) is if the sentence has the instrumental phrase *te-de* ‘with one’s hand’, we find that the latter sounds unnatural. This unnaturalness shows us the incompatibility between the instrumental adjunct phrase *te-de* and the verb *ok-u*. Here I suppose that this verb includes the instrumental information *te-de* as part of its meaning. Thus, attaching the phrase *te-de* to the verb *ok-u* as (4b), the meaning of *te-de* become redundant.

For such instrumental information, we could say that it is structured in certain verbs as their presuppositions, which is like a background information that is taken for granted.

¹ The verb *poke* can be either transitive or intransitive. When this verb is used with the meaning of touching objects with something peaking as (3), it cannot be intransitive verb and obligatorily requires its object.

Again, what is interesting here is that usually the instrumental information is no more than adjuncts in the syntactic structure. Such adjunct phrases are usually expected to freely occur in the sentence. Actually, however, the attachment of the instrumental adjunct phrases, particularly the one with inalienable possessions, to certain verbs can cause redundancy, which results in unnaturalness of the sentence as we have seen above. Based on this fact, it could be said that the instrumental information is solidly grounded in certain verbs as part of their meaning. As we have English translation for every Japanese example in this paper, it seems that not only Japanese verbs, but English ones include the instrumental information as well. Before moving on to the next subsection, we shall name such presupposition-like instrumental information SIA, Specificity of Instrumental Adjuncts.

3.2 Degree of Instrumental Adjunct Information Depending on each verb, how solidly the instrumental information is included as part of its meaning, the degree of the SIA, is various. While some verbs with very specific instrumental information, which means those verbs have a high degree of SIA, do not allow other instruments to be their instruments, other ones with a low degree do not seem to include any instrumental information as their SIA and can take several types of instruments.

3.2.1 Low Degree Verbs with a low degree of SIA seem to include a little or no particular instrumental information. With any inalienable possessions, these verbs do not cause unnaturalness which is because of redundancy. Let us consider the following examples with the verb *ik-u* ‘go’, as comparing with one of the verbs which have a high degree of the SIA, *aruk-u* ‘walk’.

- (5) a. Tomoko-wa eki-made i-tta.
Tomoko-NOM station-to go-PAST
Tomoko went to the station.
b. Tomoko-wa eki-made arui-ta.
Tomoko-NOM station-to walk-PAST
Tomoko walked to the station.
(6) a. Tomoko-wa eki-made **ashi-de**² (toho-de) i-tta.
Tomoko-NOM station-to foot-on go-PAST
Tomoko went to the station on foot.
b. ?Tomoko-wa eki-made **ashi-de** arui-ta.
Tomoko-NOM station-to foot-on walk-PAST
?Tomoko walked to the station on foot.

As long as focusing on (5), there seems to be no difference between the verb *ik-u* and *aruk-u*. Attaching the instrumental adjunct phrase *ashi-de/toho-de* ‘with one’s foot’ to these verbs as (6), however, we can find that the verb *aruk-u* includes this instrumental information as its SIA because of the redundancy in (6b). On the other hand, another verb *ik-u* does not cause redundancy with the same instrumental adjunct phrase. Furthermore, as we can see in the following example (7), the verb *ik-u* can take other types of instrumental adjuncts phrases such as *basu-de* ‘by bus’, *jitensya-de* ‘by bike’, or *kuruma-de* ‘by car’, while *aruk-u* seems to be just incompatible with those instruments. Example (6a) and (7a) clearly show us how flexibly the verb *ik-u*, which is with a low degree of SIA, take different instruments.

- (7) a. Tomoko-wa eki-made **basu-de** / **jitensya-de** / **kuruma-de** i-tta.
Tomoko-NOM station-to bus-by / bike-by / car-by go-PAST
Tomoko went to the station by bus / by bike / by car.
b. *Tomoko-wa eki-made **basu-de** / **jitensya-de** / **kuruma-de** arui-ta.
Tomoko-NOM station-to bus-by / bike-by / car-by walk-PAST
**Tomoko walked to the station by bus / by bike / by car.*

² Although the expression of *ashi-de i-tta* might sound unnatural for some Japanese speakers, it is not because of redundancy and does not mean the verb *ik-u* ‘go’ contains the particular instrumental information of *ashi-de* ‘on foot’ as its SIA. *toho-de* ‘on foot’ may sound better to present the meaning of *ashi-de*.

3.2.2 Middle Degree This type of verbs is different from the one with a low degree in that it causes redundancy with a certain instrumental adjunct phrase.

- (8) a. Hanako-wa namako-o sawa-tta.
Hanako-NOM sea cucumber-ACC touch-PAST
Hanako touched a sea cucumber.
- b. ?Hanako-wa namako-o **te-de** sawa-tta.
Hanako-NOM sea cucumber-ACC hand-with touch-PAST
?Hanako touched a sea cucumber with her hand.
- c. Hanako-wa namako-o **ashi-de** sawa-tta³.
Hanako-NOM sea cucumber-ACC foot/leg-with touch-PAST
Hanako touched a sea cucumber with her foot/leg.
- d. Hanako-wa namako-o/-ni **boo-de** sawa-tta.
Hanako-NOM sea cucumber-ACC stick-with touch-PAST
Hanako touched a sea cucumber with a stick.

For the verb *sawar-u* ‘touch’, the original form of *sawa-tta* ‘touched’ in (8), it causes redundancy with the phrase *te-de* ‘with one’s hand’ as shown in (8a); thus, this verb includes this instrumental information as its SIA. Nevertheless, in (8c) we can see the verb be compatible with an instrumental phrase having a different inalienable possession *ashi* ‘foot’. Furthermore, non-inalienable possession such as *boo* ‘stick’ can be attached to the verb as well, which we can see in (8d).

3.2.3 High Degree The verbs with a high degree of SIA specifically include particular instrumental information. Because of the high specificity, this type of verb is incompatible with some other instruments. Let us take a look at the following examples with the verb *ker-u* ‘kick’ in (9).

- (9) a. Hanako-wa booru-o ke-tta.
Hanako-NOM ball-ACC kick-PAST
Hanako kicked a ball.
- b. ?Hanako-wa booru-o **ashi-de** ke-tta.
Hanako-NOM ball-ACC foot/leg-with kick-PAST
Hanako kicked a ball ?with her foot/leg.
- c. *Hanako-wa booru-o **te-de** ke-tta.
Hanako-NOM ball-ACC hand-with kick-PAST
**Hanako kicked a ball with her hand.*
- d. *Hanako-wa booru-o **boo-de** ke-tta.
Hanako-NOM ball-ACC stick-with kick-PAST
**Hanako kicked a ball with a stick.*
- e. Hanako-wa booru-o **kakato-de / tsumasaki-de** ke-tta.
Hanako-NOM ball-ACC heel-with toe-with kick-PAST
Hanako kicked a ball with her heel / with her toe.

As the unnaturalness in the example (9b) shows, the verb *ker-u* includes the instrumental phrase *ashi-de* ‘with one’s foot’ as its SIA. From (9c) and (9d), we find that this verb does not match another inalienable possession or non-inalienable possession because of its high degree of SIA, while the verb *sawar-u* ‘touch’, which is with a middle degree of SIA, does in example (8).

As for the example (9e), some readers might wonder why the redundancy does not occur, though the verb *ker-u* whose SIA is *ashi-de* is compatible with *kakato* ‘heel’ or *tsumasaki* ‘toe’, which are related to the foot. Specifically, since each of *kakato* and *tsumasaki* is part of the foot, we should not be able to naturally pronounce *kakato-de ker-u* ‘kick with one’s heel’ and *tsumasaki-de ker-u* ‘kick with one’s toe’.

³ Some Japanese speakers may think that the phrase *ashi-de* ‘with one’s foot’ can be more naturally attached to the verb *sawar-u* ‘touch’ when the verb form is *sawa-tte-shima-tta* ‘accidentally have touched’.

However, we can pronounce those phrases without unnatural redundancy. Probably the reason why unnatural redundancy does not occur is that *kakato* and *tsumasaki* are specific parts of the foot and they do not convey exactly the same concept as *ashi* ‘foot/leg’; thus, they can naturally appear with the verb *ker-u* whose SIA is *ashi-de*. From such an observation in (9e), it would be safe to suppose that even if a verb has high degree of SIA, which means the verb includes particular instrumental information like *ashi-de* ‘with one’s foot/leg’ for the verb *ker-u* ‘kick’, some inalienable possessions which are similar to the SIA can naturally appear, as long as they are more specific and not exactly the same as that SIA. This phenomenon is significantly related to the following section which discusses the relation between the instrumental information additional information.

4 Instrumental Information and Additional Information

4.1 Specifying the Instrumental Information We shall begin with looking at example (10), which contains the verb *sawar-u* ‘touch’, the original form of *sawa-tta* ‘touched’. Each sentence in (10) includes the instrumental phrase *te-de* ‘with one’s hand’. Since this instrumental information is the SIA of the verb *sawar-u*, we would be able to suppose that all the sentences in (10) could sound unnatural because of the redundancy between the instrumental adjunct phrase *te-de* and the SIA of *sawar-u*. Contrary to our guess, however, (10b) and (10c) are naturally pronounced without any unnaturalness. Why do (10b) and (10c) sound natural though the instrumental phrase *te-de* and the verb *sawar-u* co-appear in both sentences?

- (10) a. ?Jiro-wa namako-o **te-de** sawa-tta.
 Jiro-NOM sea cucumber-ACC hand-with touch-PAST
 ?Jiro touched a sea cucumber **with his hand**.
 b. Jiro-wa namako-o **migi-te-de** sawa-tta.
 Jiro-NOM sea cucumber-ACC right-hand-with touch-PAST
 Jiro touched a sea cucumber **with his right hand**.
 c. Jiro-wa namako-o **doronotsuita-te-de** sawa-tta.
 Jiro-NOM sea cucumber-ACC muddy-hand-with touch-PAST
 Jiro touched a sea cucumber **with his muddy hand**.

This is probably because of the additional information *migi* ‘right’ in (10b) and *doronotsuita* ‘muddy’ in (10c). The attachment of the extra information to the instrumental phrase *te-de* enables us to avoid just repeating exactly the same instrumental information as the SIA of *sawar-u*. The similar phenomenon can be seen in the following example with the verb *ker-u* ‘kick’ as well.

- (11) a. ?Hanako-wa booru-o **ashi-de** ke-tta.
 Hanako-NOM ball-ACC foot/leg-with kick-PAST
 ?Hanako kicked a ball **with her foot/leg**.
 b. Hanako-wa booru-o **migi-ashi-de** ke-tta.
 Hanako-NOM ball-ACC right-foot/leg-with kick-PAST
 Hanako kicked a ball **with her right foot/leg**.
 c. Hanako-wa booru-o **kegashi-teiru-ashi-de** ke-tta.
 Hanako-NOM ball-ACC get injured-PERF-foot/leg-with kick-PAST
 Hanako kicked a ball **with her injured foot/leg**.

Although the verb *ker-u* ‘kick’ and the instrumental phrase *ashi-de* ‘with one’s foot’, which is the SIA of the verb, co-appear in (11b) and (11c), both sentences sound natural due to the additional information *migi* ‘right’ in (11b) and *kegashi-teiru* ‘injured’ in (11c). As have seen in (10) and (11), even if the redundancy between the instrumental adjunct phrase and the SIA of certain verbs seem to occur, we can avoid that situation by attaching some additional information to the instrumental phrase. This is because the extra information such as *migi* or *doronotsuita* makes the instrumental phrase specific, and it keeps us from just repeating exactly the same information as the SIA. This phenomenon is similar to the one which we have seen in the prior section that *kakato-de ker-u* ‘kick with one’s heel’ or *tsumasaki-de ker-u* ‘kick with one’s toe’ is naturally pronounced, because heel and toe are the specific part of foot, the SIA of the verb *ker-u* ‘kick’.

4.2 Decrease in the Degree of Instrumental Adjunct Information⁴ In the following discussion, we are continuously dealing with the relation between the instrumental information and additional information. We shall see the examples with the verb *ker-u* ‘kick’ in (12). (12a) sounds unnatural for the SIA of this verb is *ashi-de* ‘with one’s foot’ and the redundancy occurs in this sentence. In (12b), we can see the extra information *migi* ‘right’ make the instrumental phrase *ashi-de* specific, which enables us to avoid just repeating exactly the same information as the SIA of *ker-u*. As for (12c), we cannot see the instrumental information *ashi-de*.

- (12) a. ?Hanako-wa booru-o **ashi-de** ke-tta.
 Hanako-NOM ball-ACC foot/leg-with kick-PAST
 ?Hanako kicked a ball **with her foot/leg**.
 b. Hanako-wa booru-o **migi-ashi-de** ke-tta.
 Hanako-NOM ball-ACC right-foot/leg-with kick-PAST
 Hanako kicked a ball **with her right foot/leg**.
 c. *Hanako-wa booru-o **migi-de** ke-tta.
 Hanako-NOM ball-ACC right-with kick-PAST
 Hanako kicked a ball **with her right**

Based on the discussion which we have made above, we could suppose that sentence (12c) would be natural for the verb *ker-u* ‘kick’, which includes the instrumental information *ashi-de* as part of its meaning. However, we find that the phrase *migi-de ke-tta* ‘kicked with one’s right’ sounds very unnatural. From this observation, we probably need to restate the relationship between the instrumental information and additional information. Concretely, although we have concluded that when we have some additional information, the inalienable possession *can* show up with the verb whose SIA is exactly the same as that inalienable possession, we now need to state that the inalienable possession *should* be attached in such situation. If the inalienable possession can optionally show up when there is additional information, the sentence (12c) in which *migi* ‘right’ appears alone as the instrumental phrase like *migi-de* ‘with one’s right’, should sound natural without any problems. Nevertheless, the actual judgment toward the phrase **migi-de ke-tta* ‘*kicked with one’s right’ is that it sounds unnatural.

Following the above-mentioned discussions in other sections, the phenomenon which occurs in (12c) is a little strange, for we have understood that the unnaturalness of *?ashi-de ker-u* ‘?kick with one’s foot’ is caused by the existence of the instrumental information in certain verbs, which is the SIA. Considering that the information of *ashi-de* ‘with one’s foot/leg’ is included in the verb *ker-u* as part of its meaning, the phrase in (12c) **migi-de ke-tta* ‘*kicked with one’s right’ seems to be acceptable, but not in actuality. From this observation, we can suppose that when some additional information such as *migi* ‘right’ exists, the degree of the SIA somehow decreases, even if the SIA seems to be solidly included in certain verbs⁵. In other words, the specificity of the instrumental information in some verbs could become unstable when some additional information is attached to the inalienable possession; thus, **migi-de keru* ‘*kick with one’s right’ is not informative enough for listeners to be completely sure that this action of kicking is executed by the foot. Therefore, the phrase *migi-ashi-de keru* ‘kick with one’s right foot/leg’, which seems to cause the unnatural redundancy, is actually much preferable to **migi-de keru*.

Incidentally, some Japanese native speakers might think that the phrase **migi-de ke-tta* ‘*kicked with one’s right’ could be relatively natural in a very specific context as following: there is a soccer player named John who usually kicks a ball with his left foot/leg⁶. In a game, he accidentally used his right foot,

⁴ At the 1st Asian Junior Linguistics Conference (AJL) where I presented some part of this paper, I got some comments from Professor Diana Archangeli (University of Hong Kong). She gave me an unnatural English example ‘*kick with one’s top’ to compare with a grammatical one ‘kicked a ball with the top of one’s foot.’, which helped me have the discussion in this section.

⁵ According to the judgment of some Japanese native speakers including the author herself, the presupposition that the action of *ker-u* ‘kick’ is held by use of *ashi* ‘foot/leg’ seems to be weaken or disappeared when they hear *migi-de ke-tta* ‘kicked with one’s right’, in which the additional information appears alone.

⁶ The similar phenomenon can occur with other verbs as well. Taking *mi-ru* ‘see’ for instance, **migi-de mi-ru* ‘*see (something) with one’s right’ sound weird compared with *migi-me-de mi-ru* ‘see (something) with one’s right eye’.

and an announcer said with excitement “*John-ga migi-de ke-tta!* (John kicked with his right!)”. If such use of the phrase **migi-de ke-tta* is regarded as natural, we might be able to suppose that when a context is specific enough to identify a particular instrument which should be used, the additional information can naturally show up alone. In that situation of soccer game, it is obvious that the foot is used for moving a ball. Hence, **migi-de ke-tta* ‘*kicked with one’s foot/leg’ could be naturally uttered.

5 Conclusion

This paper has investigated the relation of instrumental adjunct phrases and the instrumental adjunct information which is included in certain verbs. Throughout the entire discussion, I have stated that some verbs include the instrumental information as part of their meaning, which indicates the instrument that is used for the action denoted by those verbs. What is notable here is that implicit presupposition-like information, which is structured in the predicates as SIA and the knowledge toward such information are unconsciously shared by speakers in each language; thus, when presupposition-like information, which is taken for granted, happens to be pronounced, the redundancy between the presupposed information and pronounced information results in the unnaturalness. Nevertheless, when the quality of the information to be uttered by speakers is different from the one which is implicitly presupposed by predicates, even if the difference is very slight, the speaker needs to pronounce that new information. Moreover, through the above discussion, we have realized that the appearance of the seemingly unnatural phrases or sentences can come to be allowed as long as the use of that phrases or sentences is beneficial in certain contexts. Specifically, in the phrase *migi-ashi-de ker-u* ‘kick with one’s right foot’, the unnatural phrase *?ashi-de ker-u* ‘?kick with one’s foot’ is allowed for conveying the additional information *migi* ‘right’. Additionally, even the significantly unnatural phrase *migi-de ker-u* ‘kick with one’s right’ can naturally appear to show the surprised feeling in a soccer game, which is accounted for in the section four. The judgment toward the acceptability, which we have dealt with in this paper, is sometimes very subtle. However, it is intriguing that the acceptability toward seemingly unnatural phrases or sentences can be changed by some small factors, such as the existence of some additional information or the context that phrase is used. For the vision of my future research, I am interested in continuously pursuing the relation of the acceptability of seemingly unnatural expressions with contexts.

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However, if we imagine the situation of reading the chart in the eye test, the phrase *migi-de mite-kudasai* ‘please see/look at the chart with your right’ can be a natural instruction given by a nurse, because it is obviously one’s eye(s) that is used in this particular context.